

S/M No. :

Service Manual

Microwave Oven

Model: KOR-1N9Z9S25

✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://svc.dwe.co.kr>).

DAEWOO 
ELECTRONICS

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PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not operate or allow the oven to be operated with the door open.
- (b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.
- (c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
- (d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
- (e) A microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

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SAFETY AND PRECAUTIONS

CAUTION

This device is to be Serviced only by Properly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.

(Only a trained service personnel should make repairs.)

- (1) A broken door hinge.
- (2) A broken door viewing screen.
- (3) A broken front panel, oven cavity.
- (4) A loosened door lock.
- (5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN.

The microwave oven has concealed switches to make sure the power is turned off when the door is opened.

Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. FOR SAFE SERVICE PROCEDURES

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to servicing, a microwave emission check should be performed prior to servicing the oven.
 - (a) inform the manufacturer, importer or assembler,
 - (b) repair the unit at no cost to the owner,
 - (c) attempt to ascertain the cause of the excessive leakage,
 - (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3. If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer and CDRH immediately.

CAUTION

MICROWAVE RADIATION

PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON OR OTHER MICROWAVE GENERATING DEVICE IF IT IS IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS. WAVEGUIDE FLANGES AND PASKETS MUST BE SECURE. NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE ENERGY ABSORBING LOAD ATTACHED. NEVER LOOK INTO AN OPEN SAVEGUIDE OR ANTENNA WHILE THE DEVICE IS ENERGIZED.

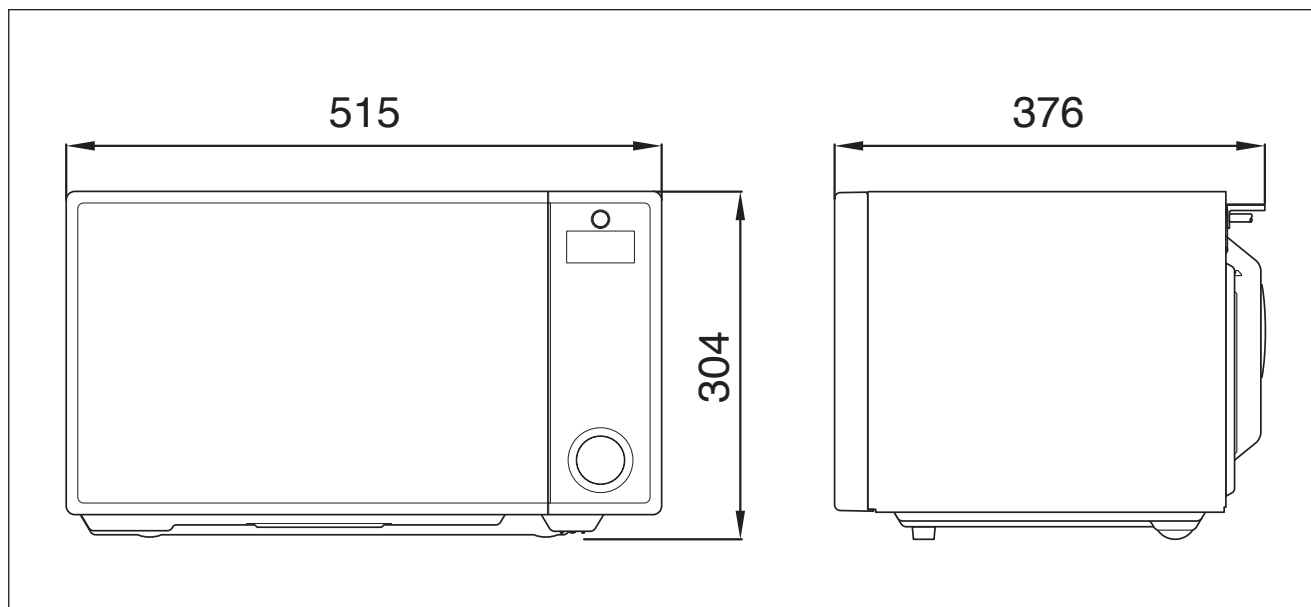
SPECIFICATIONS

POWER SUPPLY		230V AC, 50Hz SINGLE PHASE WITH EARTHING
MICROWAVE	INPUT POWER	1400 W
	ENERGY OUTPUT	1000 W
	FREQUENCY	2,450 MHz
OUTSIDE DIMENSIONS (W x H x D)		515 x 304 x 376 mm
CAVITY DIMENSIONS (W x H x D)		356 x 249 x 359 mm
CAVITY VOLUME		31 L
NET WEIGHT		APPROX. 13.6 Kg
TIMER		59 min. 90 sec.
POWER SELECTIONS		10 Levels

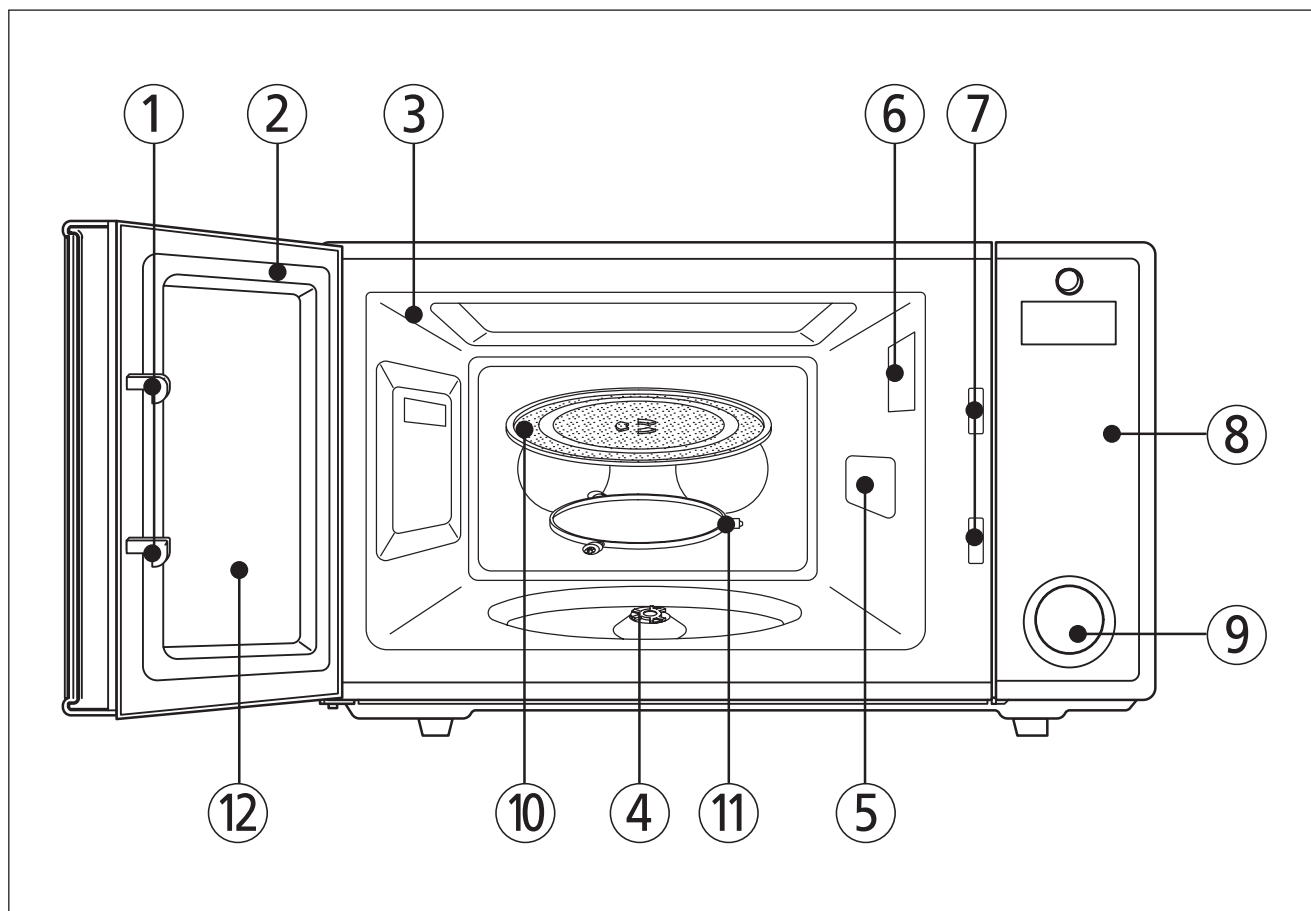
* Specifications are subject to change without notice.

EXTERNAL VIEW

1. OUTER DIMENSION

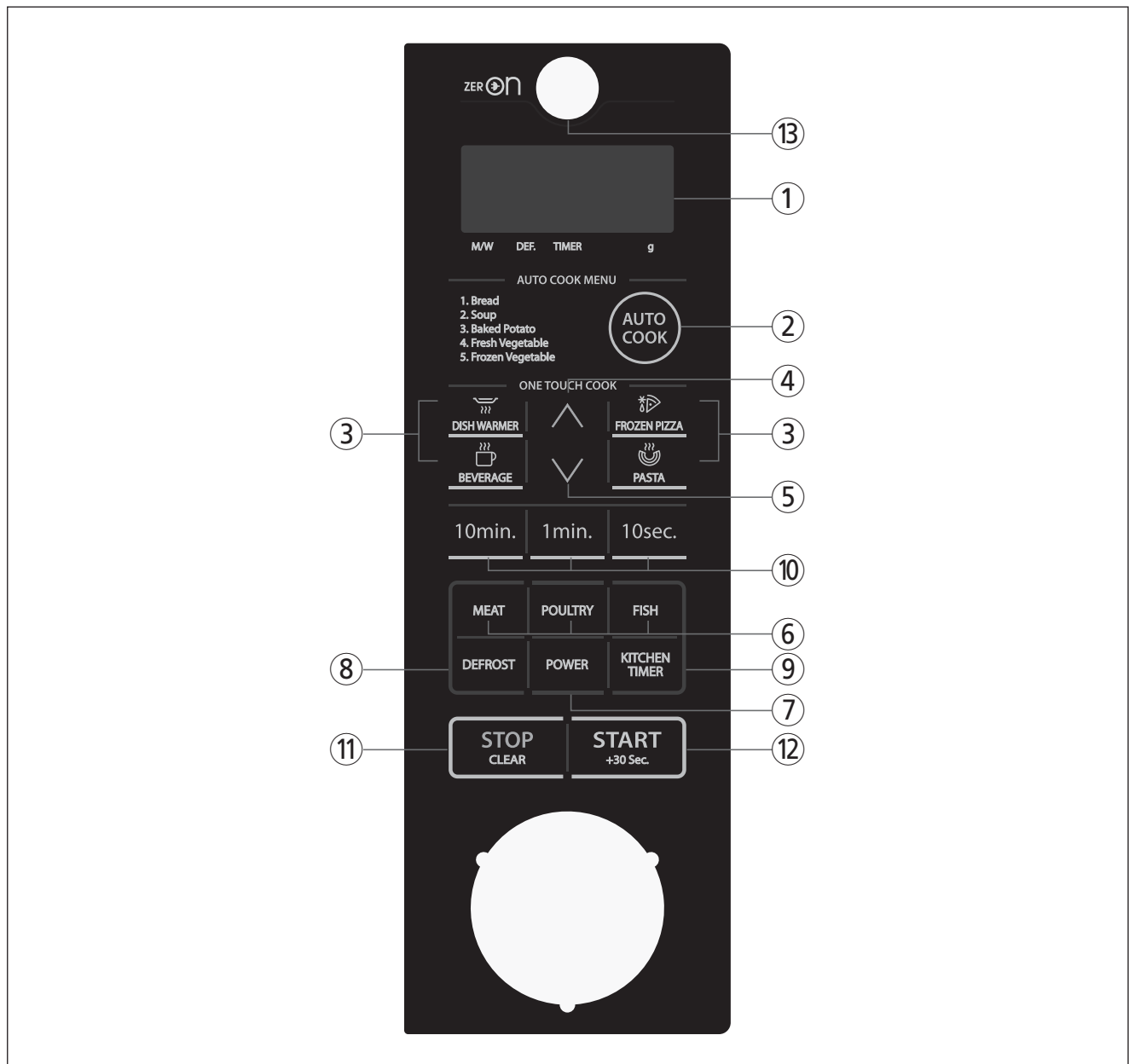


2. FEATURES DIAGRAM



- ① **Door latch** - When the door is closed, it will automatically shut off. If the door is opened while the oven is operating, the magnetron will automatically shut off.
- ② **Door seal** - The door seal surfaces prevent microwaves escaping from the oven cavity.
- ③ **Oven cavity**
- ④ **Coupler** - This fits over the shaft in the center of the oven cavity floor. This is to remain in the oven for all cooking.
- ⑤ **Waveguide cover** - Protects the microwave outlet from splashes of cooking foods.
- ⑥ **Oven lamp** - Automatically turns on during oven operating.
- ⑦ **Safety interlock system**
- ⑧ **Control panel**
- ⑨ **Door open button** - To open the door push the door open button.
- ⑩ **Glass cooking tray** - Made of special heat resistant glass. The tray must always be in proper position before operating. Do not cook food directly on the tray.
- ⑪ **Roller guide** - This must always be used for cooking together with the glass cooking tray.
- ⑫ **Viewing screen** - Allows viewing of food. The screen is designed so that light can pass through, but not the microwave.

3. CONTROL PANEL



① **Display** - Cooking time, power level, indicators and are displayed.

② **Auto cook** - Used to cook or reheat.

③ **One touch** - Used to cook or reheat specific quantities of food.

④ **More** - Used to add time to cooking.

⑤ **Less** - Used to remove time from cooking.

⑥ **Auto Defrost** - Used to defrost foods. (for weight)

⑦ **Power** - Used to set power level.

⑧ **Defrost** - Used to defrost foods. (for time)

⑨ **Kitchen Timer** - Used as a minute timer, delay cooking, hold setting after cooking.

⑩ **Time set pad** - Used to set the cooking time and defrost time.

⑪ **Stop/Clear** - Used to stop the oven operation or to delete the cooking data.

⑫ **Start /+30 Sec.-** Used to start the oven and also used to set a reheat time.

⑬ **Zero on** - Used to turn the AC power on the oven.

INSTALLATION

1. Steady, flat location

This microwave oven should be set on a steady, flat surface.

This microwave oven is designed for counter top use only.

2. Leave space behind and side

All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, cause failure.

3. Away from radio, and TV sets

Poor television reception and radio interference may result if the oven is located close to a TV, radio, antenna, or feeder and so on. Position the oven as far from them as possible.

4. Away from heating appliances and water taps

Keep the oven away from hot air, steam and splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

5. Power supply

- Check your local power source.

This microwave oven requires a current of approximately 6.5 amperes, 230 Volts, 50 Hz.

- Power supply cord is about 0.8 meters long.

- Used the voltage must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.

- This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type. Such a cable can be purchased from DAEWOO and must be installed by a qualified person.

6. Examine the oven after unpacking for any damage such as:

A misaligned door, broken door or a dent in cavity.

If any of the above are visible, DO NOT INSTALL, and notify dealer immediately.

7. Do not operate the oven if it is colder than room temperature

(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

EARTHING INSTRUCTIONS

This appliance must be earthed. In the event of an electrical short circuit, earthing reduces the risk of the electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a earthing plug. The plug must be plugged into an outlet that is properly installed and earthed.

WARNING

Improper use of the earthing plug can result in a risk of electric shock. Consult a qualified electrician or service-man if the earthing instructions are not completely understood, or if doubt exists as to whether the appliance is properly earthed, and either : If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade earthing plug, and a 3-slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance, or DO NOT USE an extension cord.

OPERATIONS AND FUNCTIONS

1. Connect the main lead to an electrical outlet.
2. After placing the food in a suitable container, open the oven door and put it on the glass tray. The glass tray must always be in place during cooking.
3. Close the door securely.
4. When the oven door is opened, the light turns off.
5. The oven door can be opened at any time during operation.
The oven will automatically shut off. To restart the oven, close the door and then touch START.
6. Each time a button is touched, a BEEP will sound to acknowledge the touch.
7. The display will show : 0 when press and hold ZERO ON button until display is turned on and beep sounds.
8. When the STOP/CLEAR button is touched during the oven operation, the oven stops cooking and all information retained.
To erase all information, touch the STOP/CLEAR button once more. If the oven door is opened during the oven operation, all information is retained.
9. If the START button is touched and the oven does not operate, check the area between the door and door is closed securely. The oven will not start cooking under the door is completely closed or the program has been reset.

Make sure the oven is properly installed and plugged into the electrical.

Wattage output chart

The power level is set by pressing the POWER button. The chart shows the display, the power level and the percentage of power.

Touch POWER button	Power level(Display)	Approximate Percentage of Power
once	P-HI	100%
twice	P-90	90%
3 times	P-80	80%
4 times	P-70	70%
5 times	P-60	60%
6 times	P-50	50%
7 times	P-40	40%
8 times	P-30	30%
9 times	P-20	20%
10 times	P-10	10%
11 times	P-00	0%

DISASSEMBLY AND ASSEMBLY

Cautions to be observed when troubleshooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment.

It is completely safe during normal operation.

However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit.

You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and wear rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

(1) Check the grounding.

Do not operate on a two-wire extension cord.

The microwave oven is designed to be used while earthed.

It is imperative, therefore, to make sure it is earthed

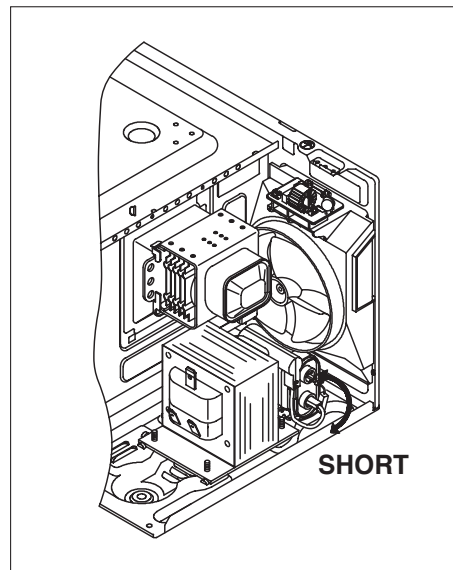
properly before beginning repair work.

(2) Warning about the electric charge in the high voltage capacitor.

For about 30 seconds after the operation stopped and electric charge remains in the high voltage capacitor.

When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screwdriver to discharge.

4. When the 10A fuse is blown out due to the operation of the monitor switch; replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
6. Do not operate without cabinet.

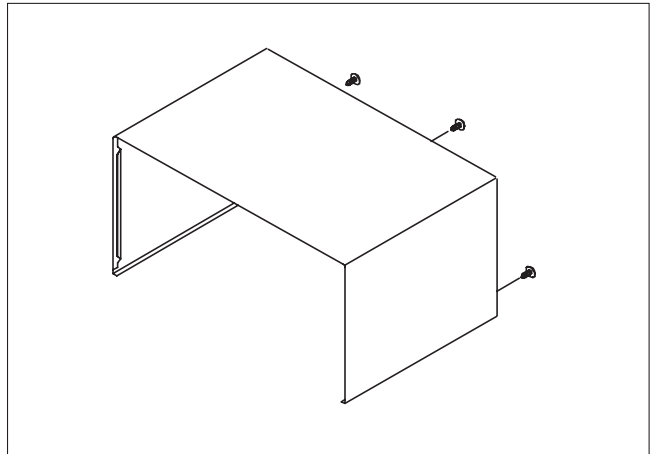


CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

WARNING : When servicing the appliance, need a care of touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - HV Transformer, Magnetron, HV Capacitor, HV Diode, HV fuse.

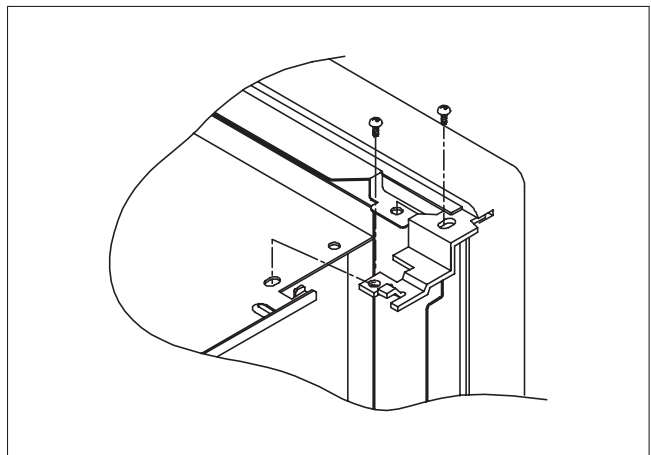
1. To remove cabinet

- 1) Remove three screws on cabinet back.
- 2) Pull the cabinet backward.



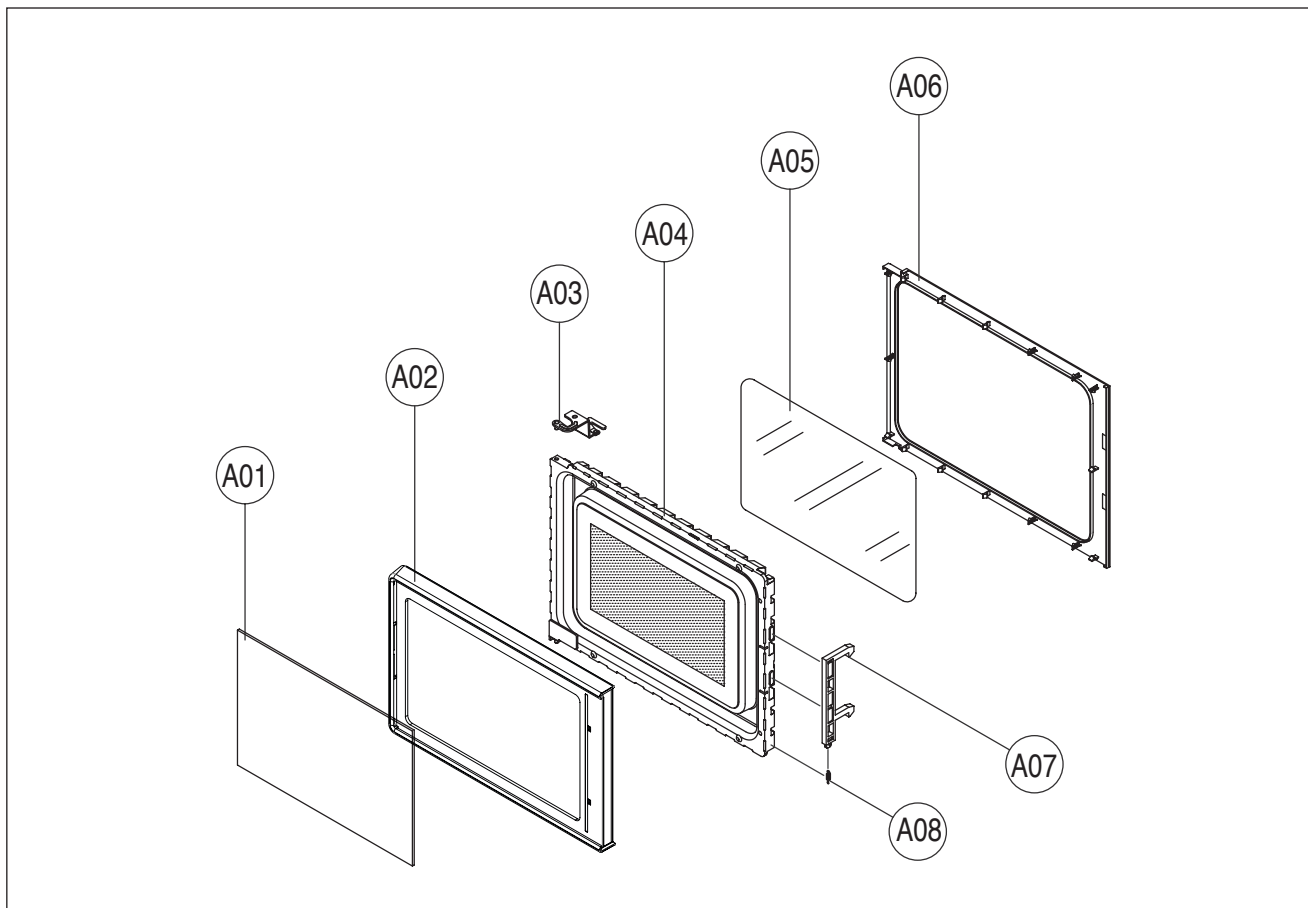
2. To remove door assembly

- 1) Remove two screws which secure the stopper hinge top.
- 2) Remove the door assembly from top plate of cavity.
- 3) Reverse the above for reassembly.



NOTE : After replacing the door assembly, perform a check of correct alignment with the hinge and cavity front plate.

3. To remove door parts.



REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A00	3511731450	DOOR AS	KOR-1N9M9P25	1	
A01	3517012010	BARRIER-SCREEN *O	TEMP GLASS T3.2 PATTERN	1	
A02	3512212300	FRAME DOOR	ABS SG-0760D,SG-175	1	
A03	3515204120	STOPPER HINGE *T AS	KOR-6L0B1A	1	
A04	3511727500	DOOR PAINTING AS	KOR-1N0A9A	1	
A05	3517006000	BARRIER-SCREEN *I	PE T0.1	1	
A06	3512301330	GASKET DOOR	PP	1	
A07	3513100700	HOOK	POM	1	
A08	3515101900	SPRING HOOK	PW-1	1	

- (1) Remove the gasket door from the door painting as.
- (2) Remove the barrier screen inner from the door painting as.
- (3) Remove the door frame from the door painting as.
- (4) Remove the stopper hinge top from the door painting as.
- (5) Remove the spring and the hook.
- (6) Remove the barrier screen outer from the door frame.
- (7) Reverse the above steps for reassembly.

4. Method to reduce the gap between the door seal and the oven front surface.

(1) To reduce gap located on part 'A'

- Loosen two screws on the stopper hinge top, and then push the door to contact the door seal to the oven front surface.
- Tighten two screws.

(2) To reduce gap located on part 'B'

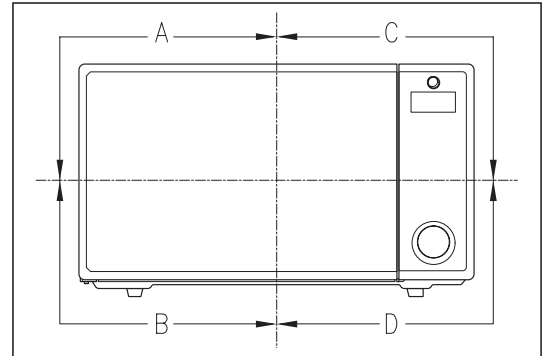
- Loosen two screws on the stopper hinge under, and then push the door to contact the door seal to the oven front surface.
- Tighten two screws.

(3) To reduce gap located on part 'C'

- Loosen the screw on the interlock switch assembly located the top of the oven body.
- Draw the interlock switch assembly inward as possible to engage with the hook on the door bottom.
- Tighten a screw.

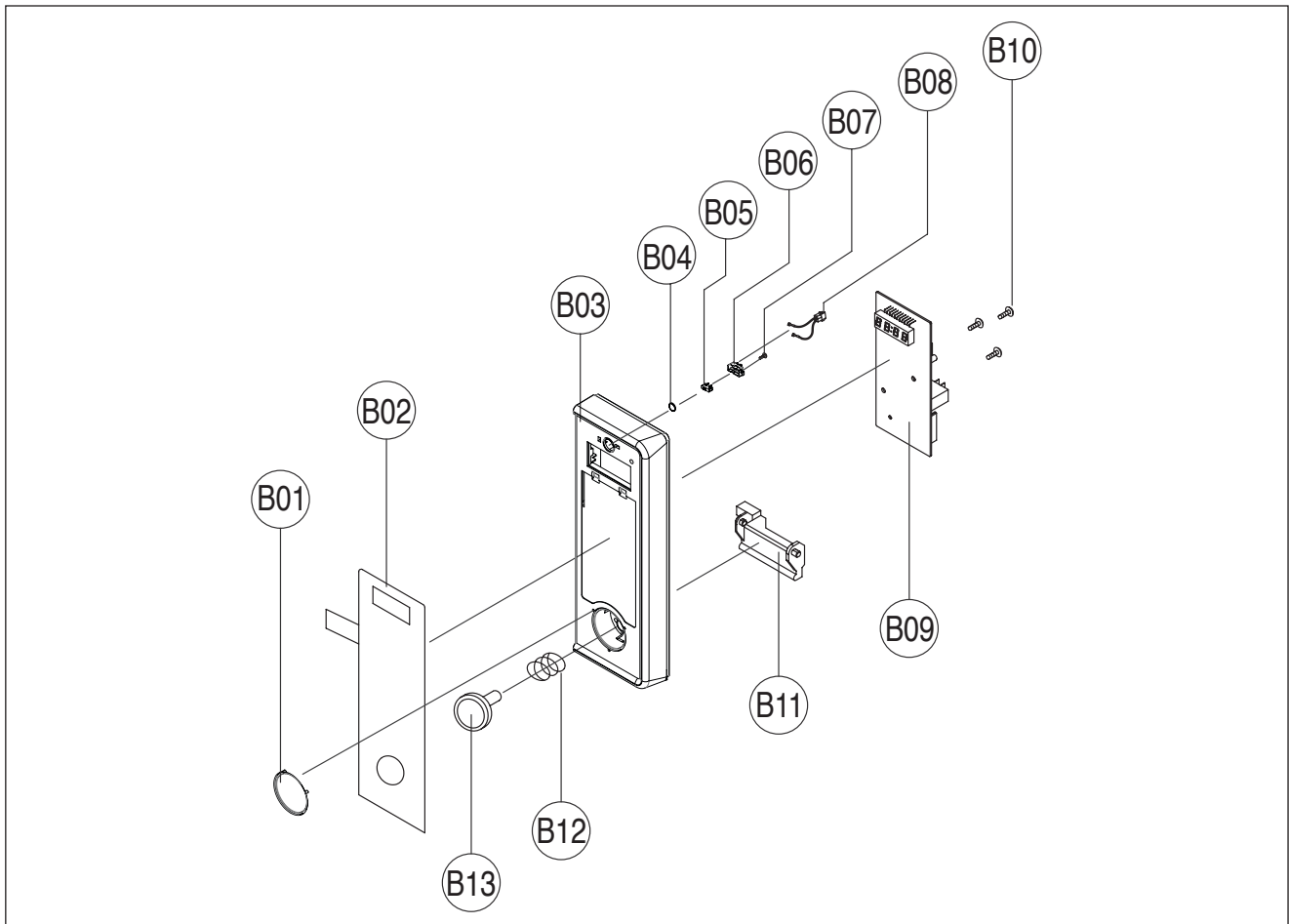
(4) To reduce gap located on part 'D'

- Loosen the screw on the interlock switch assembly located the bottom of the oven body.



NOTE : A small gap may be acceptable if the microwave leakage does not exceed 4mW/cm².

5. To remove control panel parts.

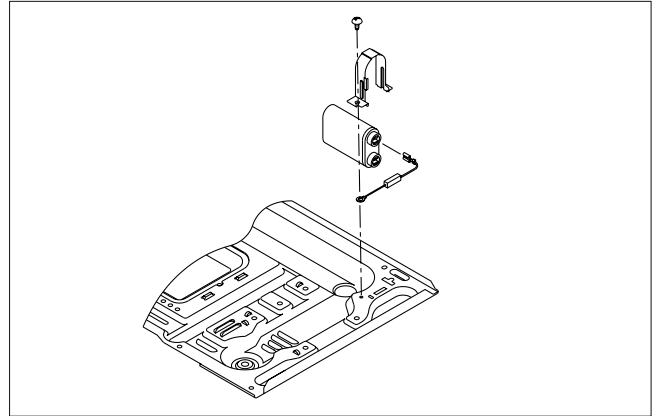


REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B00	PKCPSWYS60	CONTROL-PANEL AS	KOR-1N9Z9S25	1	
B01	3511633320	DECORATOR RING	ABS SG-0760D SG-175 COATING	1	
B02	3518573580	SWITCH MEMBRANE	KOR-1N9Z9S	1	
B03	3516743600	CONTROL-PANEL	ABS SG-0760D,SG-175	1	
B04	3516922800	BUTTON STANDBY	SG-0760D,SG-175	1	
B05	5S732G30X0	SW MICRO	MS2-T0T200 250/125V 5A T85	1	
B06	3513006300	HOLDER STANDBY SW	PP	1	
B07	7121300611	SCREW TAPPING	T2S PAN 3X6 MFZN	1	
B08	3512785410	HARNESS SWITCH MICRO	KOR-1N9M9V	1	
B09	PKMPMSZZ14	PCB MAIN MANUAL AS	KOR-1N9Z9S25	1	
B10	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	3	
B11	3513702700	LEVER DOOR OPEN	PP	1	
B12	441G430171	SPRING BUTTON	SWP DIA. 0.7	1	
B13	3516922900	BUTTON DOOR OPEN	ABS SG-0760D,SG-175	1	

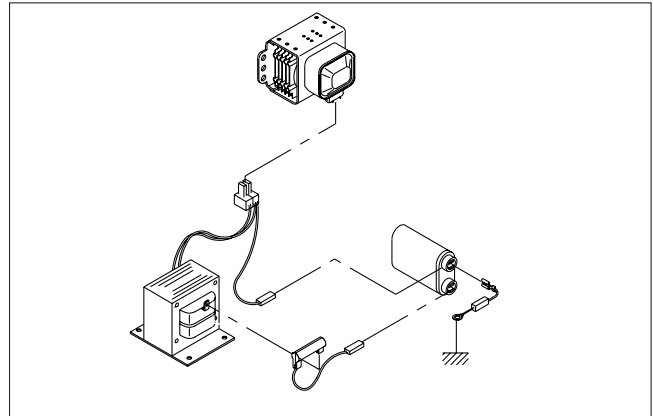
- (1) Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
- (2) Remove three screws which secure the PCB assembly to the control panel.
- (3) Disconnect membrane tail from the connector of the PCB assembly.
- (4) Remove the PCB from the control panel.
- (5) Remove the membrane, lever door open, spring button and button door open from the control panel.
- (6) Reverse the above steps for reassembly.

6. To remove high voltage capacitor.

- 1) Remove the screw which secure the grounding ring terminal of the H.V. diode and the capacitor holder.
- 2) Remove the H.V. diode from the capacitor holder.
- 3) Reverse the above steps for reassembly.

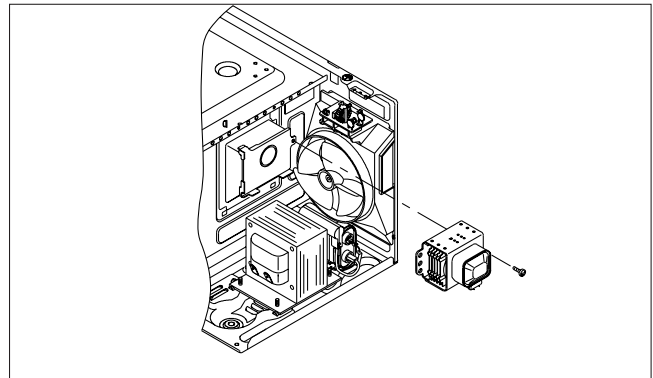


◆ High voltage circuit wiring

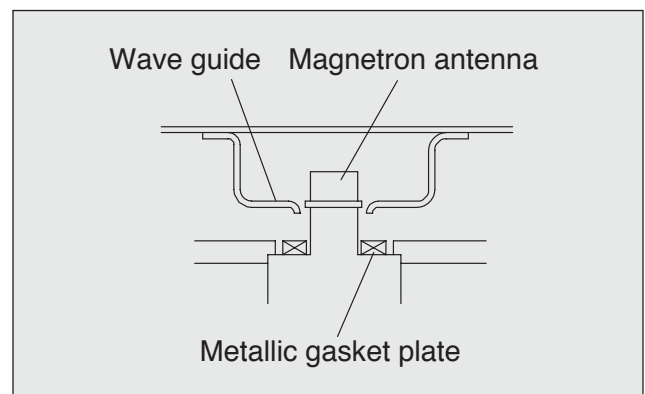
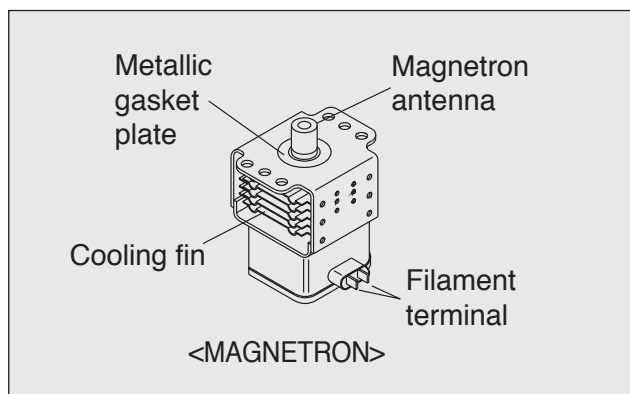


7. To remove magnetron.

- 1) Remove the screw which secure the magnetron.
- 2) Remove the magnetron.
- 3) Reverse the above steps for reassembly.

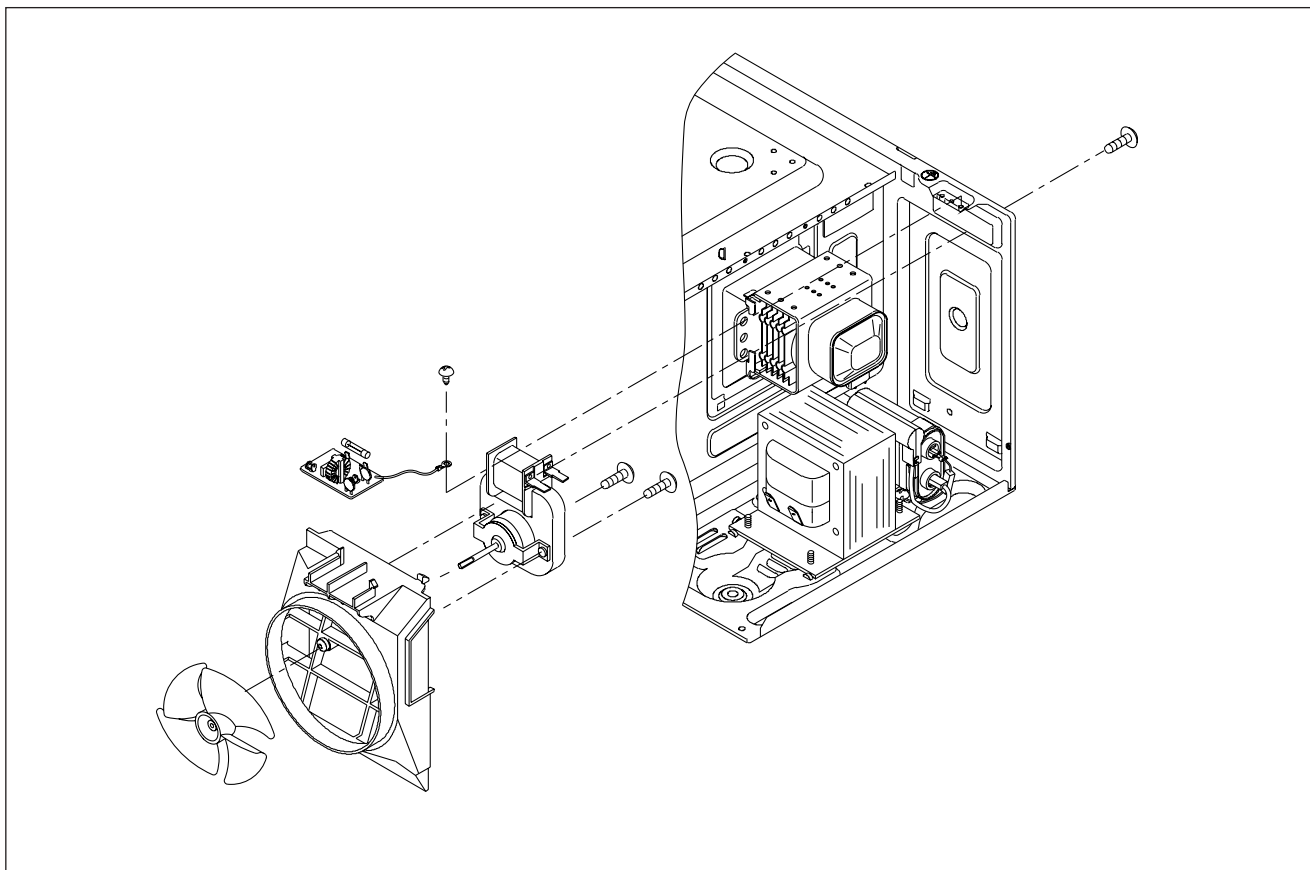


NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed $4\text{mW}/\text{cm}^2$ for a fully assembled oven with door normally closed.



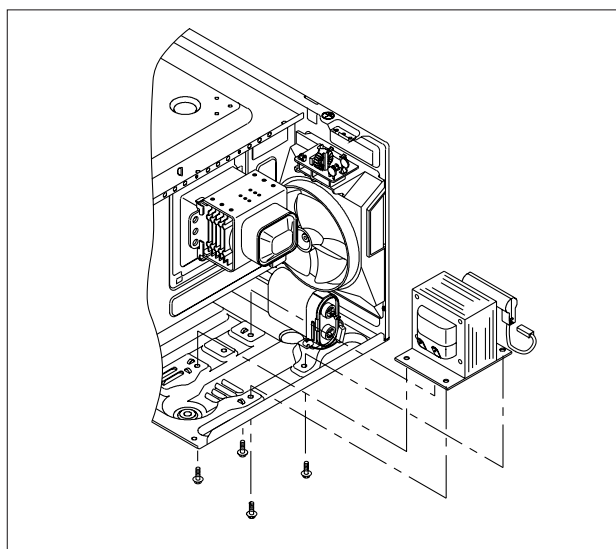
8. To remove wind guide assembly.

- 1) Remove the screw for earthing.
- 2) Remove the noise filter from the wind guide.
- 3) Remove the screw which secure the wind guide assembly.
- 4) Draw forward the wind guide assembly.
- 5) Pull the fan from the motor shaft.
- 6) Remove two screws which secure the motor shaded pole.
- 7) Remove the motor shaded pole.
- 8) Reverse the above steps for reassembly.



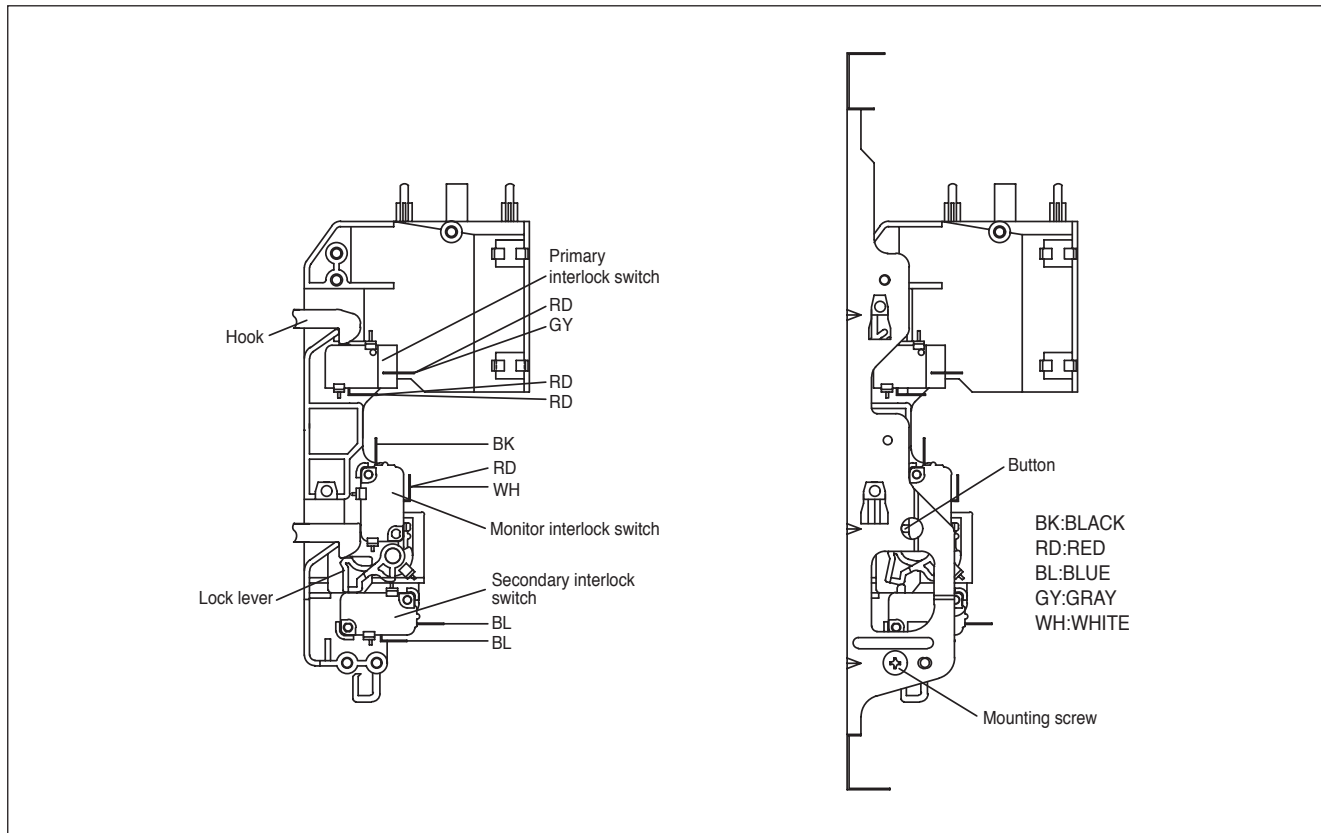
9. To remove H.V.transformer.

- 1) Remove four screws holding the H.V.transformer.
- 2) Remove the H.V.transformer.
- 3) Reverse the above steps for reassembly.



INTERLOCK MECHANISM AND ADJUSTMENT

The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.



(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly, the oven will not operate. When the door is closed, the hook pushes the button of the microswitch. Then the button of the primary interlock switch bring it under "ON" condition.

(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the lock lever downward. The lock lever presses the button of the interlock monitor switch to bring it under "OFF" condition and presses the button of the Secondary interlock switch to bring it under "ON" condition.

ADJUSTMENT :

Interlock monitor switch

When the door is closed, the interlock monitor switch should be "OFF" condition before other switches are closed. When the door is opened, the interlock monitor switch should be "ON" condition after other switches are opened.

(3) Adjustment steps

- Loosen the mounting screw.
- Adjust interlock switch assembly position.
Actuation distance of primary and secondary interlock switch shall be adjusted almost 0.7mm.
- Make sure that lock lever moves smoothly after adjustment is completed.
- Tighten completely a mounting screw.

NOTE :

Microwave emission test should be performed after adjusting interlock mechanism. If the microwave emission exceed $4\text{mW}/\text{cm}^2$, readjust interlock mechanism.

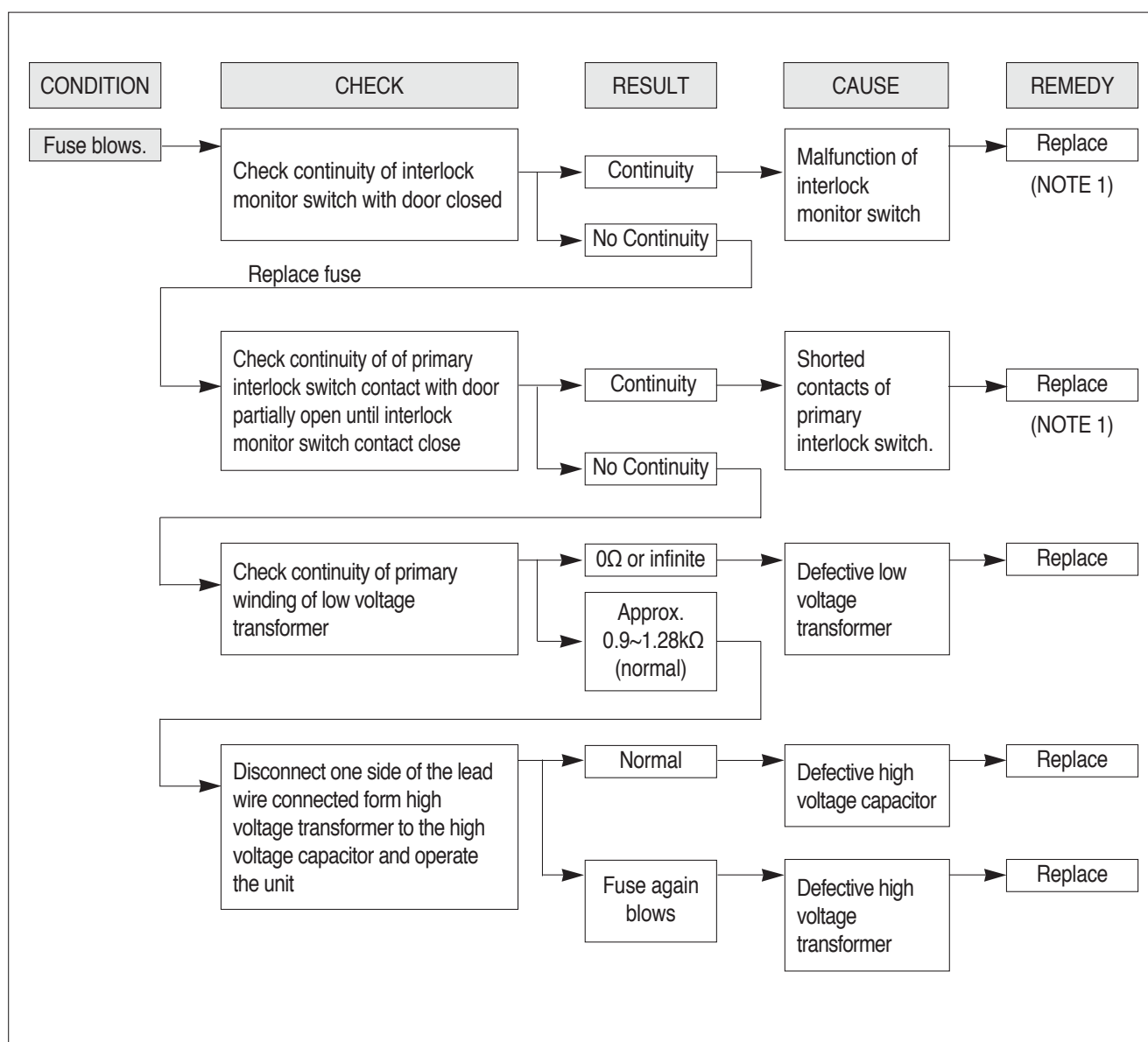
TROUBLESHOOTING GUIDE

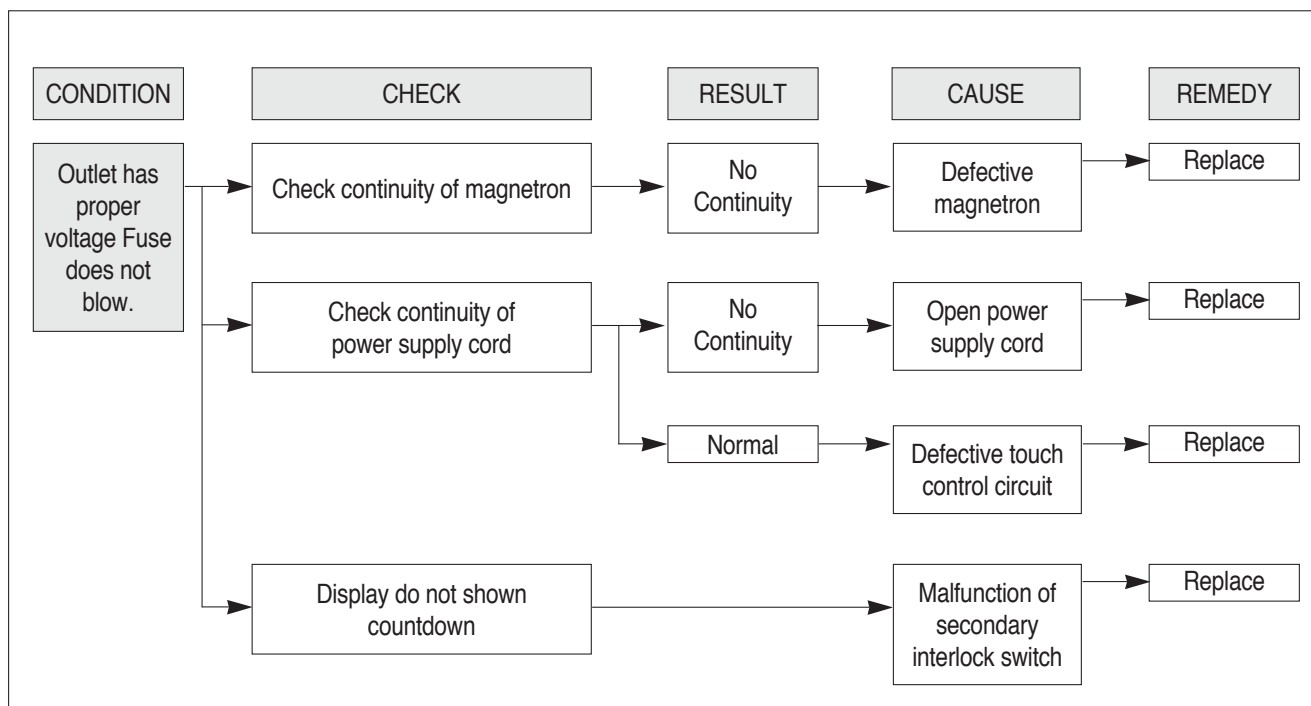
Following the procedure below to check if the oven is defective or not.

1. Check grounding before trouble checking.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor.
4. When checking the continuity of the switches, fuse or high voltage transformer, disconnect one lead wire from these parts and check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

NOTE : When electric parts are checked, be sure the power cord is not inserted the wall outlet.
Check wire harness, wiring and connected of the terminals and power cord before check the parts listed below.

(TROUBLE 1) Oven does not operate at all ; any inputs can not be accepted.

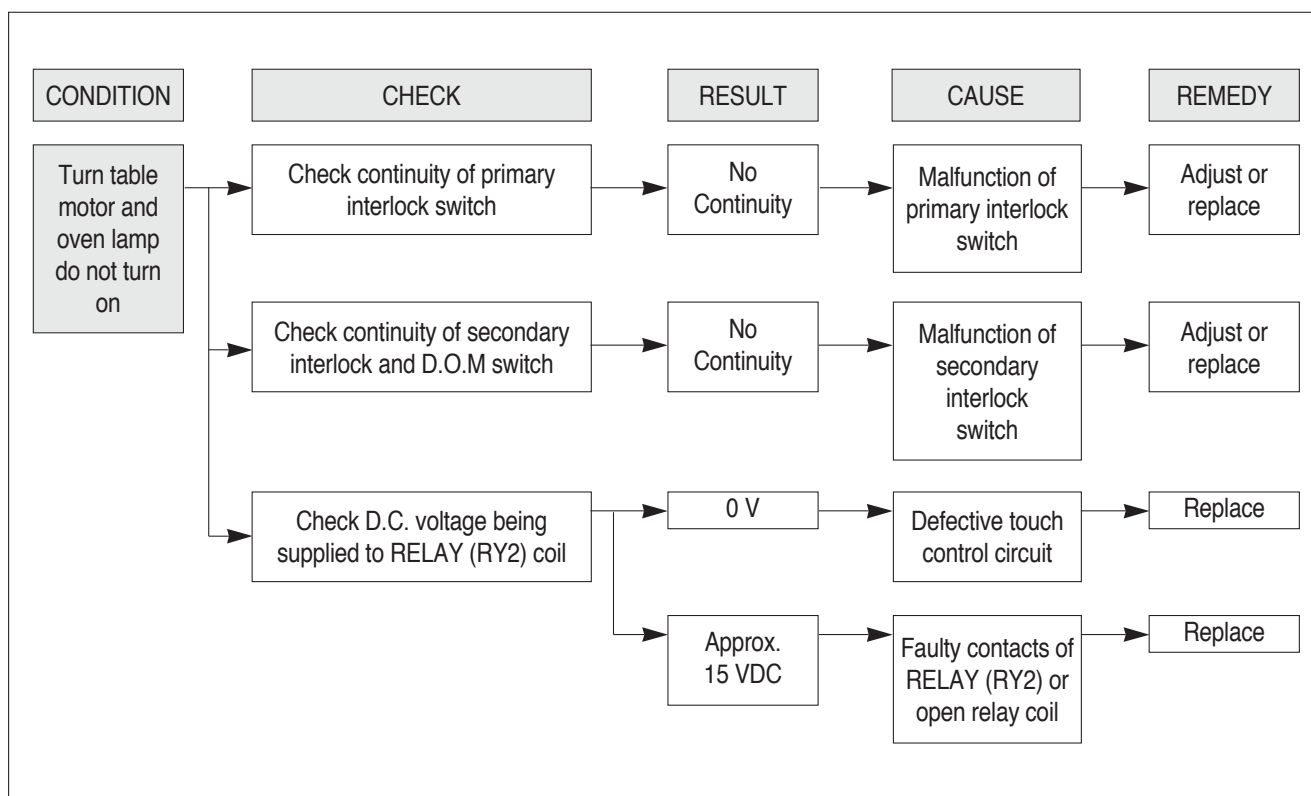




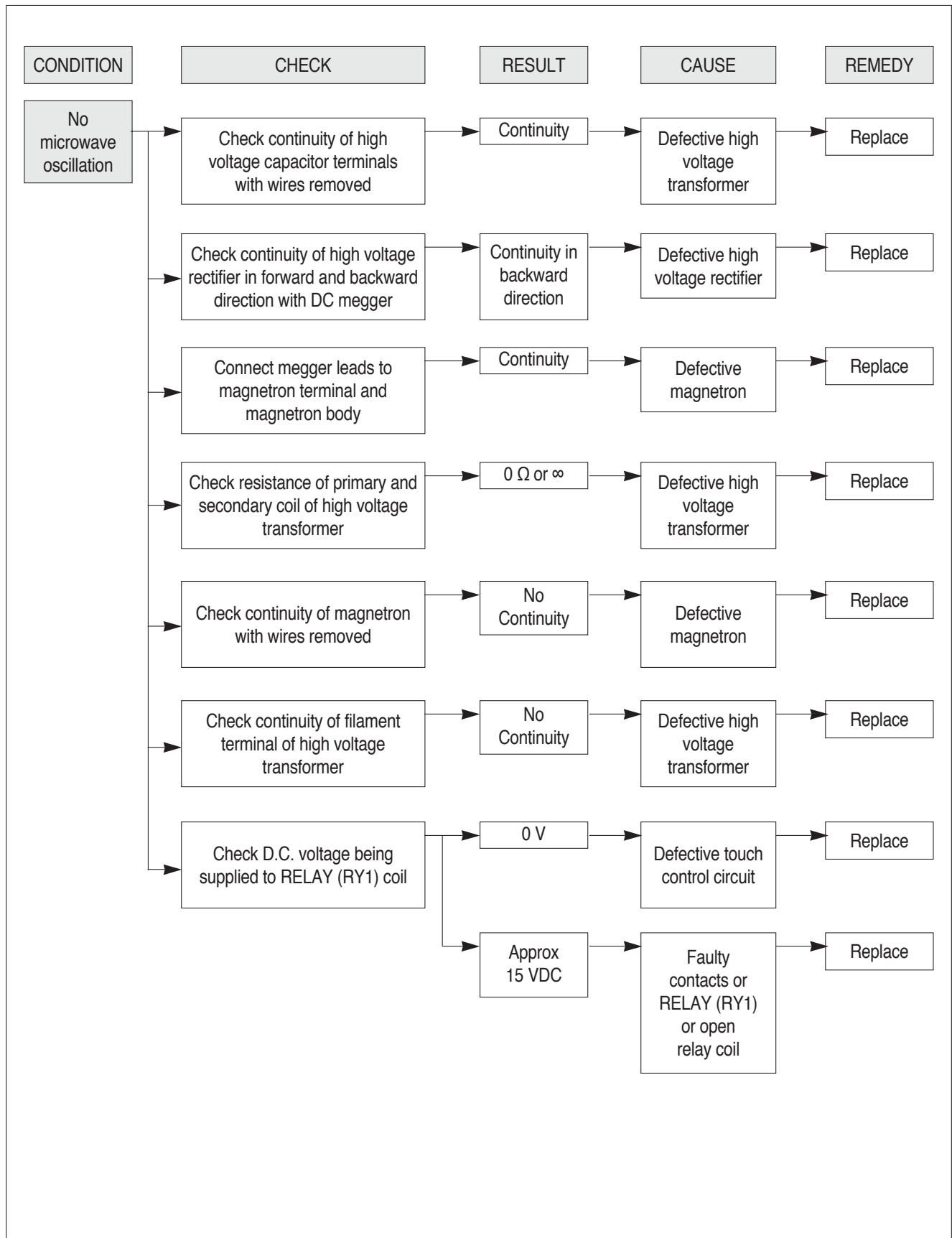
NOTE 1

All these switches must be replaced at the same time, please refer to “Interlock Mechanism And Adjustment”.

(TROUBLE 2) Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and the START pad is touched.

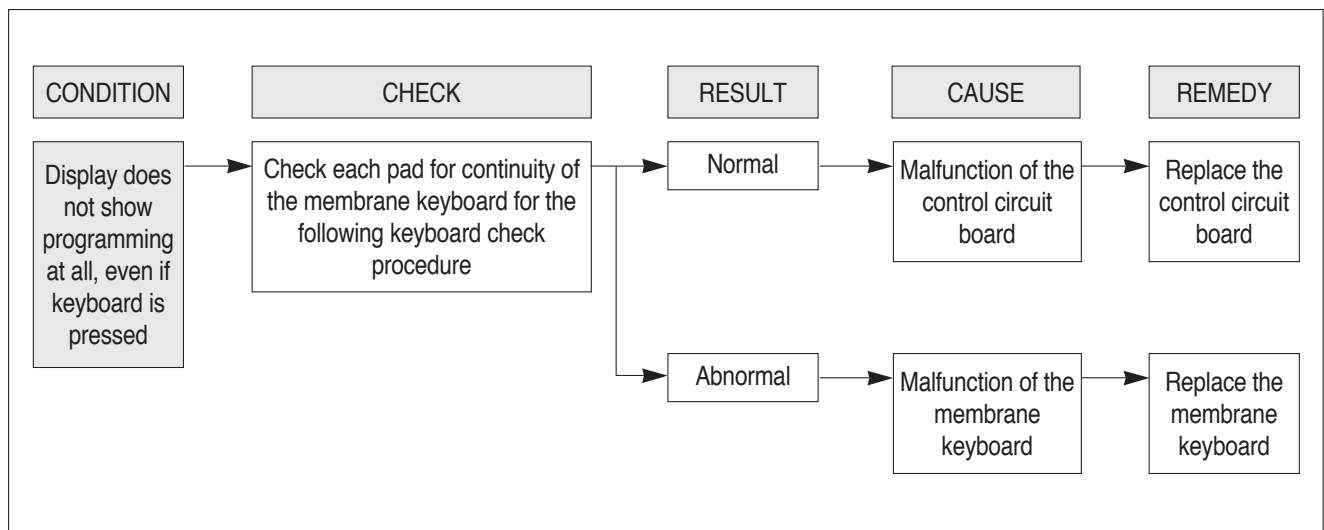
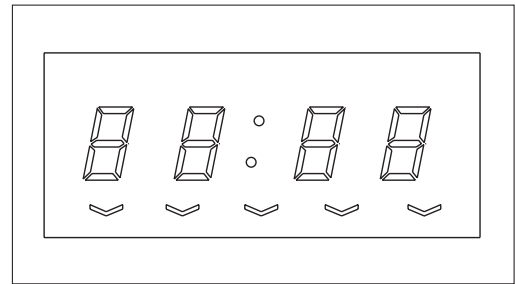


(TROUBLE 3) No microwave oscillation even though fan motor rotates.



(TROUBLE 4) The following visual conditions indicate a probable defective touch control circuit

1. Incomplete segments
 - (1) Segments missing
 - (2) Partical segments missing
 - (3) Digit flickering other than normal display slight flickering
 - (4) “:0” does not display when press and hold ZERO ON button until display is turned on and beep sounds.
2. A distinct change in the display is not on when it should be.
3. One or more digits in the display are not on when they should be.
4. Display indicates a number different from one touched.
5. Specific numbers (for example 2 or 3) will not display when the panel is touched.
6. Display does not count down or up with time cooking.
7. Oven is programmable and cooks normally but no display shows.
8. Display obviously jumps in time while counting down.
9. Display counts down noticeably too fast while cooking.
10. Oven lamp and turntable motor do not stop although cooking is finished. Check if the RELAY 2 contacts close.
If they close, replace P.C.B assembly.



NOTE

Before following the particular steps listed above in the trouble shooting guide for the membrane keyboard's failure, please check for the continuity of each wire-harness between the membrane keyboard and P.C.B. assembly.

MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE

1. A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3mm, an external diameter of approximately 190mm and a height of approximately 90mm.
The mass of the container is determined.
2. At the start of the test, the oven and the empty container are at ambient temperature. Water having an initial temperature of $10^{\circ}\text{C} \pm 1^{\circ}\text{C}$ is used for the test. The water temperature is measured immediately before it is poured into the container.
3. A quantity of $1000\text{g} \pm 5\text{g}$ of water is added to the container and its actual mass obtained.
The container is then immediately placed in the centre of the oven shelf, which is in its lowest normal position.
The oven is operated and the time for the water temperature to attain $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ is measured. The oven is then switched off and the final water temperature is measured within 60s.

NOTE 1 - The water stirred is before its temperature is measured.

NOTE 2 - Stirring and measuring devices are to have a low heat capacity.

4. The microwave power output is calculated from the formula

$$P = 4,187 \cdot m_w(T_2 - T_1)/t + 0.55 \cdot m_c(T_2 - T_0)/t$$

where

P is the microwave power output, in watts ;

m_w is the mass of the water, in grams ;

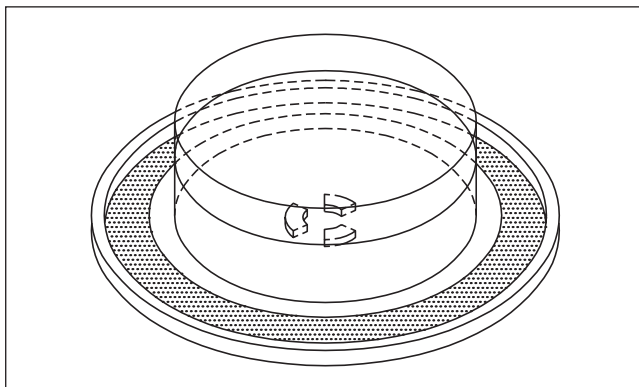
m_c is the mass of the container, in grams ;

T_0 is ambient temperature, in degrees Celsius ;

T_1 is the initial temperature of the water, in degree Celsius ;

T_2 is the final temperature of the water, in degrees Celsius ;

t is the heating time, in seconds, excluding the magnetron filament heating-up time.



* The microwave power output is stated in watts, rounded off to the nearest 50W

CAUTION

1. Water load should be measured exactly to 1 liter.
2. Input power voltage should be exactly specified voltage (Refer to 2. SPECIFICATIONS).
3. Ambient temperature should be $20 \pm 2^{\circ}\text{C}$ ($68 \pm 3.6^{\circ}\text{F}$)

* Heating time for power output: ($T_2 = T_0$)

A (second)	70	64	60	56	52	49	47	44	42	40	38
B (W)	600	650	700	750	800	850	900	950	1000	1050	1100

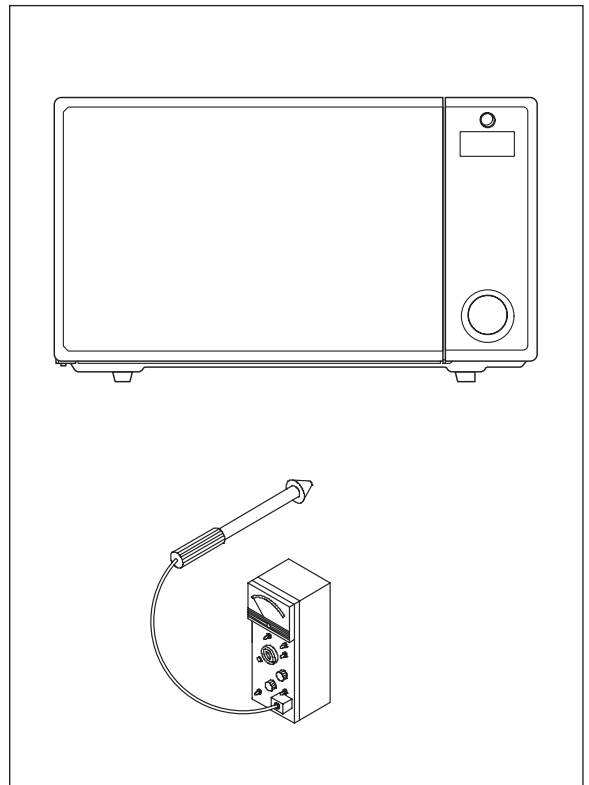
2. MICROWAVE RADIATION TEST

CAUTION :

1. Make sure to check the microwave leakage before and after repair of adjustment.
2. Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
3. Do not place your hands into any suspected microwave radiation field unless the safe density level is known.
4. Care should be taken not to place the eyes in direct line with the source of microwave energy.
5. Slowly approach the unit under test until the radiometer reads an appreciable microwave leakage from the unit under the test.

PROCEDURES

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C(212°F).
2. Pour 275cc±15cc of tap water initially at 20±5°C(68±9°F) in the 600cc glass beaker with an inside diameter of approx. 95mm(3.5in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
 - 1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm².
 - 2) When measuring the leakage, always use the 5cm(2in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door seem, door viewing screen, the exhaust air vents and the suction air vents.
 - 3) Measuring should be in a counter-clockwise direction at a rate of 1 in./sec. If the leakage of the cabinet door seem is unknown, move the probe more slowly.
 - 4) When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 in. from any metal. If it does not, erroneous reading may result.



3. COMPONENT TEST PROCEDURE

- High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- It is neither necessary nor advisable to attempt measurement of the high voltage.
- Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.

1. High voltage transformer

- (1) Remove connections from the transformer terminals and check continuity.
- (2) Normal readings should be as follows:
 - Secondary winding Approx. $140\Omega \pm 10\%$
 - Filament winding Approx. 0Ω
 - Primary winding Approx. 2Ω

2. High voltage capacitor

- (1) Check continuity of capacitor with meter on the highest OHM scale.
- (2) A normal capacitor will show continuity for a short time, and then indicate $10M\Omega$ once the capacitor is charged.
- (3) A shorted capacitor will show continuous continuity.
- (4) An open capacitor will show constant $10M\Omega$.
- (5) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

- (1) Isolate the diode from the circuit by disconnecting the leads.
- (2) With the ohmmeter set on the highest resistance scale measure the resistance across the diode terminals.
 - Reverse the meter leads and again observe the resistance reading.
 - Meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
 - A normal diode's resistance will be infinite in one direction and several hundred $K\Omega$ in the other direction.

4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output".

Continuity checks can only indicate an open filament or a shorted magnetron.

To diagnose for an open filament or a shorted magnetron.

- (1) Isolate magnetron from the circuit by disconnecting the leads.
- (2) A continuity check across magnetron filament terminals should indicate 0.1Ω or less.
- (3) A continuity check between each filament terminal and magnetron case should read open.

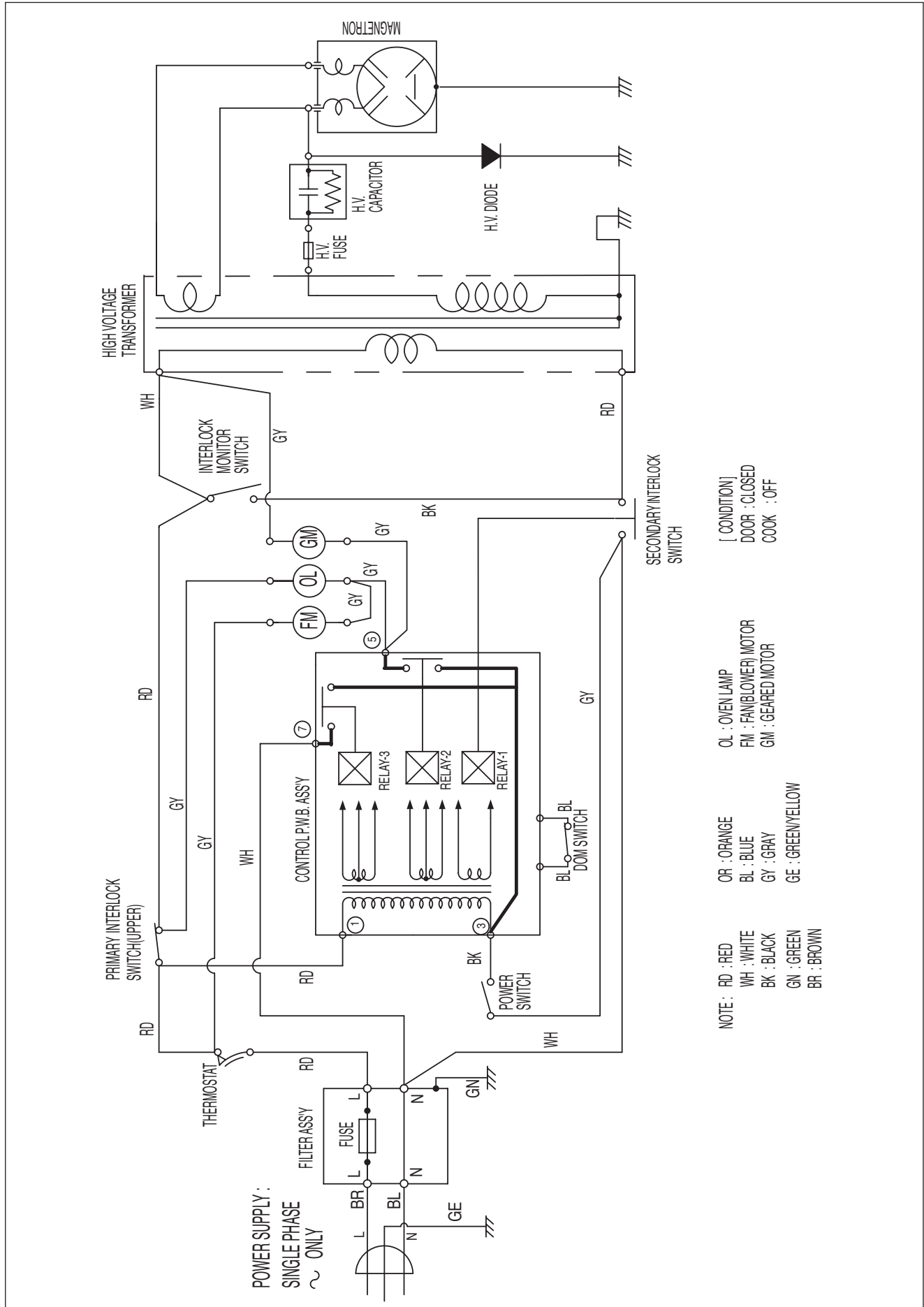
5. Fuse

If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse.

In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time.

Replace just the fuse if the switches operate normally.

WIRING DIAGRAM



PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1. Low Voltage Transformer check

- The low voltage transformer is located on the P.C.B.
- Measuring condition: input voltage : 230V / Frequency : 50Hz

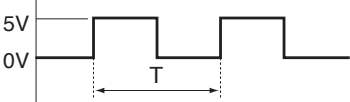
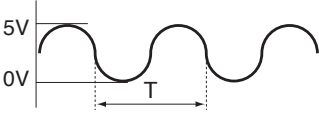
Terminal Voltage	LOAD	NO LOAD
(4,5)-6 or (7,8)-6	AC 25.3 V	AC 30.8 V

NOTE :

1. Refer to Circuit Diagram (point 4).
2. Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.
3. The allowable tolerance of the secondary voltage is within $\pm 5\%$ of nominal voltage.

2. Voltage check

- Key check point

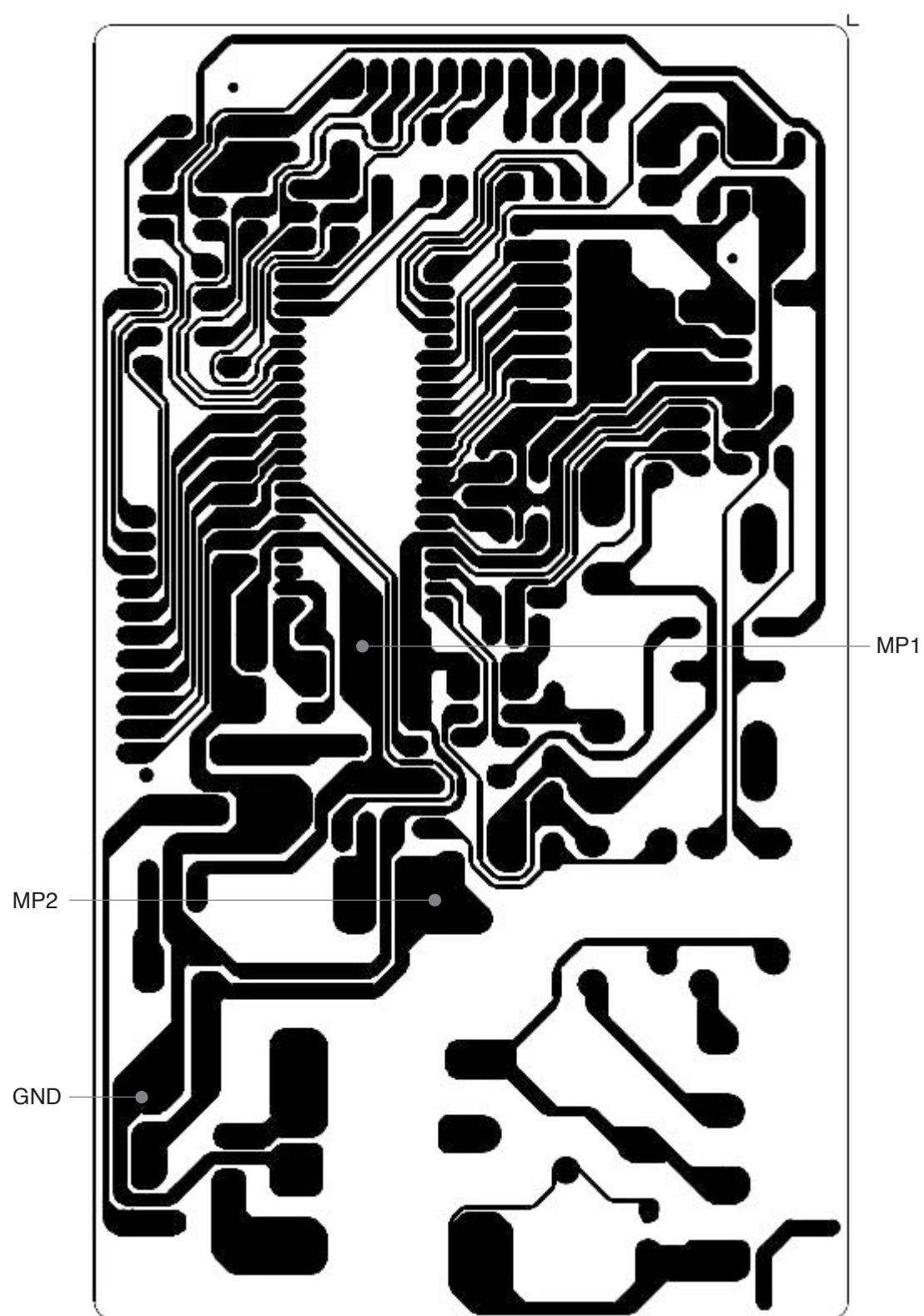
NO	CHECK POINT	REMARK
1	IC 1 PIN 5	5 VDC
2	IC 1 PIN 8	 T: 20ms (50Hz)
3	IC 1 PIN 35 OR PIN 36	 T: 250ns (4MHz)

- Check method

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	DC 5V $\pm 0.25V$	Replace VL1, EC1	NO LOAD
2	MP2	DC 15V $\pm 2.0V$	Replace EC2, D11, D13, D14	NO LOAD

NOTE :

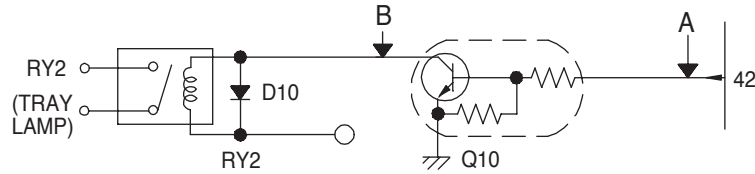
Each measure point must be measured with GND points.



Measure Point

3. When there is no microwave oscillation

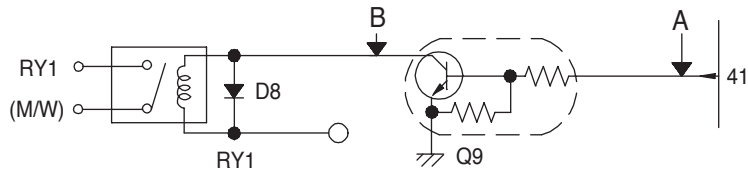
- 1) When touching **Start/+30sec.** pad, oven lamp does not turn on.
Fan motor do not rotate, but cook indicator in display comes on.



- Check method

STATE	POINT	A	B
RELAY 2 ON		5VDC	GND
RELAY 2 OFF		GND	15VDC

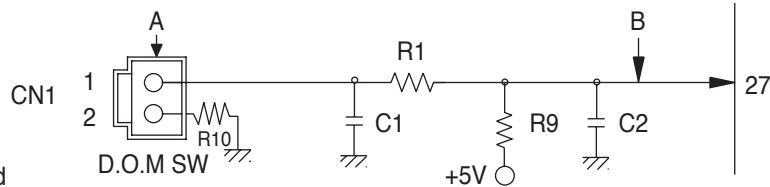
- 2) When touching **Start/+30sec.** pad, oven lamp turns on.
Fan motor and turntable rotate and cook indicator in display comes on.



- Check method

STATE	POINT	A	B
RELAY 1 ON		5VDC	GND
RELAY 1 OFF		GND	15VDC

4. When the door is opened during operation, the count down timer does not stop.



-Check method

STATE	POINT	A	B
1) DOOR OPEN		OPEN	5VDC
2) DOOR CLOSED		CLOSE	GND

CHECK NO	METHOD	REMEDY
1	Check the stage (ON, OFF) of the door open monitor switch by resistance measurement.	Replace door open monitor switch.

5. When the digital clock does not operate properly.

→ refer to Circuit Diagram

POINT	WAVE FORM
IC 1 PIN 8	

* If clock does not keep exact time, you must check resistor R20 and zener diode ZD2.



3. PCB LOCATION NO.

NO	NAME	SYMBOL	SPECIFICATION	PART CODE	Q'TY	REMARK
1	BUZZER	BZ1	BM-20K	3515600100	1	
2	C ARRAY	CA1	7P(6) 1000PF M 50V	CN6XB-102M	1	
3	CAPACITOR ELEC	EC1	50V RS 10uF	CEXE1H100A	1	
4	CAPACITOR ELEC	EC2	25V RSS 1000MF	CEXF1E102V	1	
5	CONNECTOR WAFER	CN1	YW396-02V	3519150520	1	
6	CONNECTOR WAFER	CN2	FCZ 254-11	441M367160	1	
7	CONNECTOR WAFER	CN3	YW396-07AV(YEONHO)	3519150540	1	
8	DIODE SWITCHING	D1~6,D8~D12	1N4148	DZN4148--	11	
9	DIODE RECTIFIER	D13,14	KN4004A	DZN4004A—	2	
10	DIODE ZENER	ZD2	UZ- 5.1BSB 1/2W	DZUZ5R1BSB	1	
11	LED DISPLAY	DP1	TOF-4461BG-B10	DT0F4461BG	1	
12	PCB MAIN	M360	81.5X139.9	3514332120	1	
13	R ARRAY	RA1	8P(7) 1/8 100K OHM J	RA-88X104J	1	
14	R ARRAY	RA2	7P(6) 1/8 100K OHM J	RA-87X104J	1	
15	RESISTOR	R2~8	1/6W 330 5%	RD-AZ331J-	7	
16	RESISTOR	R1,10,13,17,22	1/6W 1K 5%	RD-AZ102J-	5	
18	RESISTOR	R9	1/6W 100K 5%	RD-AZ104J-	1	
19	RESISTOR	R19,20	1/6W 10K 5%	RD-AZ103J-	2	
20	RESISTOR	R18	1/6W 1K 5%	RD-AZ102J-	1	
21	RESISTOR	R14	1/6W 1M 5%	RD-AZ105J-	1	
22	RESISTOR	R21,R24	1/4W 51 5%	RD-4Z510J-	2	
23	RESONATOR CERA	CR1	CRT 4.00MS	5P4R00MTS-	1	
24	IC REGULATOR	VL1	MC7805C	1CPMC7805C	1	
25	TRANSISTOR	Q1~5	KRA106M	TZRA106M—	5	
26	TRANSISTOR	Q7,9~11	KRC106M	TZRC106M—	4	
27	IC RESET	IC2	KIA7033AP	1K1A7033AP	1	
28	CAPACITOR CERA	C3,C5	102 50V Z AXIAL	CCZB1H102K	2	
29	CAPACITOR CERA	C1,2,4,6,7	104 50V Z AXIAL	CCZF1H104Z	5	
30	TRANS POWER	LVT1	DMR-631FS	5EPV035303	1	
31	WIRE COPPER	J1~J6	1/0.52 TIN COATING	85801052GY	6	
32	WIRE COPPER	SJ1,3,4,6	1/0.52 TIN COATING	85801052GY	4	KOR-1N9Z9S25
33	WIRE COPPER	J7,J8	1/0.52 TIN COATING	85801052GY	2	
34	SW RELAY	RY1	G5G-1A-DT 1C 1P DC12V	5SC0101123	1	
35	SW RELAY	RY2,RY3	CS11-12SH 1C 1P	5SC0101128	2	
36	IC MICOM	IC1	HMS81C1716B-HN095	150SR1N9Z-	1	

EXPLODED VIEW AND PARTS LIST

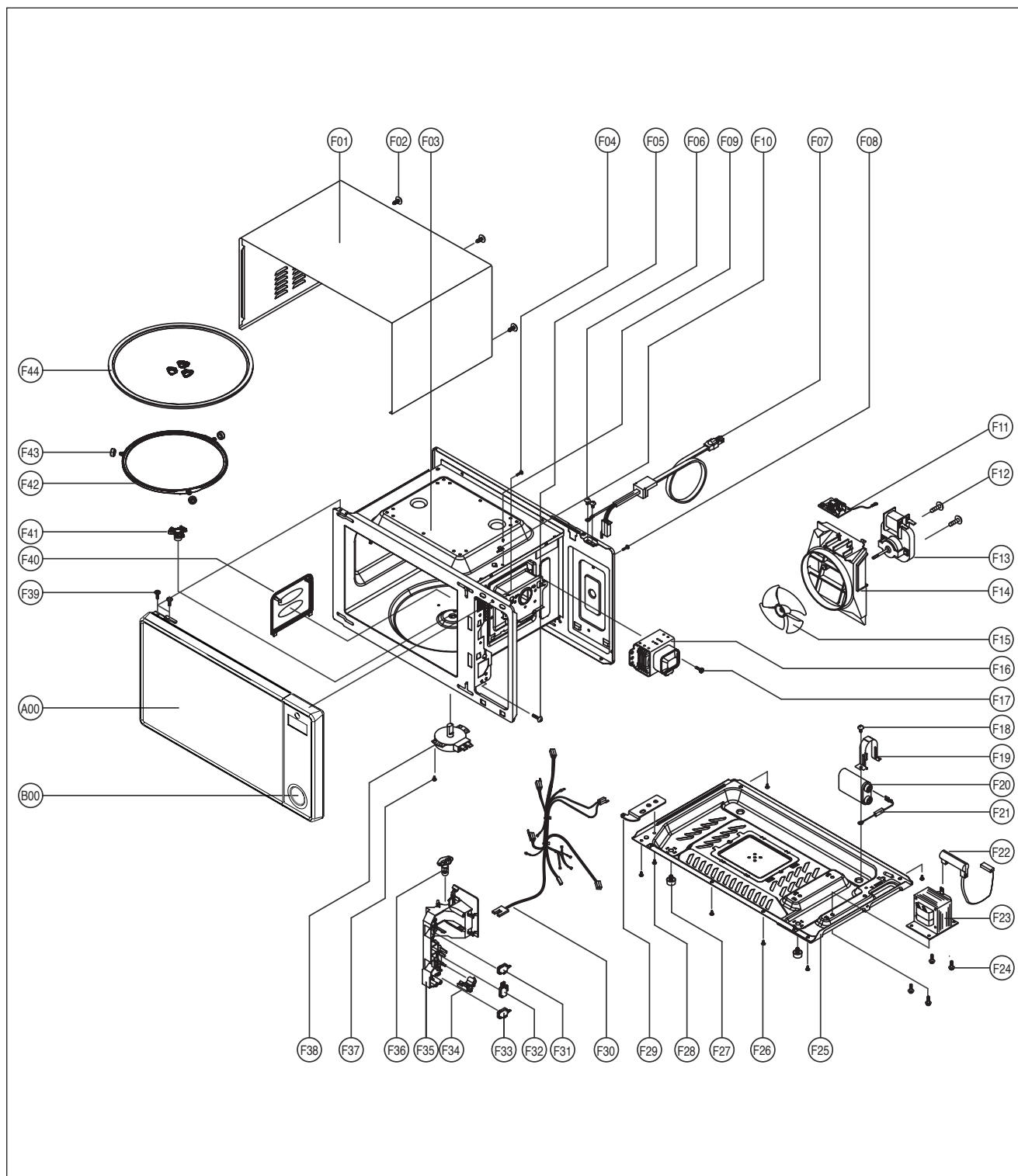
1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

3. TOTAL ASSEMBLY



REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
A00	3511731450	DOOR AS	KOR-1N9M9P25	1
B00	PKCPSWYS60	CONTROL-PANEL AS	KOR-1N9Z9S25	1
F01	3510802120	CABINET	CR T0.5	1
F02	3516004100	SPECIAL SCREW	T1 TRS LR4 POLE 4X10 MFZN	3
F03	3516119600	CAVITY AS	KOR-1N0A9A	1
F04	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	1
F05	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	1
F06	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2
F07	35113AAQM5	CORD POWER AS	3X1.0 60X60 120-RTML	1
F08	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	1
F09	7121300611	SCREW TAPPING	T2S PAN 3X6 MFZN	1
F10	3518902600	THERMOSTAT	OFF:90 ON:60 H #187	1
F11	3518606200	NOISE-FILTER	DWLF-M12	1
F12	7121402511	SCREW TAPPING	T2S PAN 4X25 MFZN	2
F13	3963514400	MOTOR SHADED POLE	230V 50HZ OEM-10DWC2-A07 (A)	1
F14	3512517000	GUIDE WIND	PP	1
F15	3511800300	FAN	PP+30%GLASS	1
F16	3518003700	MAGNETRON	2M218JFL 6CF	1
F17	3516004000	SPECIAL SCREW	T2 BOLT FLANGE 5X12 DACRO	1
F18	7S432X4081	SPECIAL SCREW	TT3 TRS 4X8 SE MFZN	1
F19	3513003200	HOLDER HV CAPACITOR	SECC T0.5	1
F20	3518303401	CAPACITOR HV	2100VAC 1.05UF #187	1
F21	3518400800	DIODE HV AS	ESJC13-12BX (CL01-12)	1
F22	3518701900	FUSE HV	5KV 0.8A T.H.V.060T	1
F23	3518124360	TRANS HV	S1S5AC DA00	1
F24	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4
F25	3510317510	BASE	SBHG T0.5	1
F26	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	6
F27	3512101400	FOOT	DASF-310	2
F28	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F29	3515201101	STOPPER HINGE *U	SCP-1 T2.5	1
F30	3512785610	HARNESS MAIN	KOR-1N9Z9S25	1
F31	4415A17352	SW MICRO	SZM-V16-FA-63	1
F32	4415A66600	SW MICRO	SZM-V16-FA-62	1
F33	3518571000	SWITCH PUSH	V0303A2 / MP101C	1
F34	3513702600	LEVER LOCK	POM	1
F35	3513811700	LOCK	POM BLACK	1
F36	3513601600	LAMP	BL 240V 25W T25 C7A H187	1
F37	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1
F38	3966821230	MOTOR SYNCRO	49TYZ-A2 5/6RMIN 4W	1
F39	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	2
F40	3511406220	COVER WAVE GUIDE	PP J640A WHITE	1
F41	3517400600	COUPLER	XAREC	1
F42	3512517300	GUIDE ROLLER	PP 5113MF6 A353B	1
F43	3514701501	ROLLER	TEFLON D:14.5	1
F44	3517203500	TRAY GLASS	GLASS	1



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